Patent claims

1. A mobile radio system having a plurality of mobile terminals (ME) connected with a mobile switching center (MZ) via an air interface for communication control and optionally for billing, the mobile terminals (ME) being controlled by a subscriber identity module (SIM) in which data for associating at least one user are stored, the subscriber identity module (SIM) having an identity (IMSI) associated therewith, characterized in that the subscriber identity module (SIM) contains a calculation rule for calculating from the stored identity (IMSI) at least one further identity (IMSI$_w$), the identities generated by the calculation rule being associated accordingly in the mobile switching center (MZ).

2. A mobile radio system having a plurality of mobile terminals (ME) connected with a mobile switching center (MZ) via an air interface for communication control and optionally for billing, the mobile terminals (ME) being controlled by a subscriber identity module (SIM) in which data for associating at least one user are stored, the subscriber identity module (SIM) having an identity (IMSI) associated therewith, characterized in that the subscriber identity module (SIM) is designed to generate a request signal and in response to this request signal the mobile switching center (MZ) communicates an alternative identity (IMSI$_w$) associated with the subscriber identity module (SIM).

3. A mobile radio system according to claim 1 or 2, characterized in that the calculation or request for a new identity (IMSI$_w$) is effected by a user entry via keyboard or menu.

4. A mobile radio system according to claim 1 or 2, characterized in that the calculation or request for a new identity (IMSI$_w$) is initialized by entry of a PIN.

5. A mobile radio system according to any of claims 1 to 4, characterized in that a further directory entry and/or a further key are calculated together with the further identity (IMSI$_w$).

6. A method for operating mobile terminals (ME) of a mobile radio system which are controlled by a subscriber identity module suitable for operation with at least two identities, characterized in that the further identities are generated by a cal-

culation rule, if required, from a single identity (IMSI) stored in the subscriber identity module (SIM).

7. A method according to claim 6, characterized in that the calculation is executed in the subscriber identity module (SIM).

8. A method according to claim 6, characterized in that the calculation is performed in the mobile switching center (MZ) at the request of the mobile terminal (ME), and the new identity is communicated to the mobile terminal (ME) via the air interface of the mobile radio system.

9. A method according to any of claims 5 to 7, characterized in that an identity is set by entry of a personal identification number (PIN) via menu and/or keyboard.

10. A method according to any of claims 6 to 9, characterized in that a further directory entry and/or a further key are calculated together with the further identity (IMSI$_w$).

11. A method according to any of claims 6 to 10, characterized in that the further identity (IMSI$_w$) is newly calculated at each check or request by the mobile switching center (MZ) or the mobile terminal (ME).

12. A method according to any of claims 6 to 10, characterized in that the further identity (IMSI$_w$) is stored temporarily in the subscriber identity module (SIM) until a new identity (IMSI) is selected or the mobile terminal (ME) is turned off.

13. A subscriber identity module (SIM) for a mobile terminal (ME) in a mobile radio system in which an identity (IMSI) for a user is stored, characterized in that a calculation rule is stored in the subscriber identity module (SIM) for calculating from the stored identity (IMSI) at least one further identity (IMSI$_w$).

14. A subscriber identity module (SIM) for a mobile terminal (ME) in a mobile radio system in which an identity (IMSI) for a user is stored, characterized in that the subscriber identity module (SIM) is designed to generate a request signal which requests an alternative identity (IMSI).

15. A subscriber identity module (SIM) according to claim 13 or 14, characterized in that the subscriber identity module contains a temporary memory area (RAM) for temporarily storing a further identity (IMSI$_w$) which is calculated or communicated by the mobile switching center (MZ).

16. A subscriber identity module according to any of claims 13 to 15, characterized in that a memory address pointer is provided for pointing to a selected temporary memory location where the currently selected identity (IMSI, $IMSI_w$) is stored.